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The Effectiveness of the Use of Foreign Languages in Teaching Academic Subjects. A Research Contribution to Educational Planning.

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Designed to ascertain whether advanced students could apply language skills acquired through a minimum of three years of study to a practical purpose such as an academic subject, this report describes and evaluates a 2-year research project involving the teaching of history in French or Spanish in a number of Virginia high schools. Following a discussion of the study problem, development, and objectives, and a description of the experimental design, this document places major emphasis on the summarization and analysis of data obtained from (1) teacher, student, and consultant evaluations, (2) experimental and control group grades, and (3) pre- and post-test scores on the Modern Language Association and World History Tests. In the two final sections, relationships are drawn between the study objectives and results, and the status of continuing, current, and future interest in teaching another subject in a foreign language is cited. Included in the three appendixes are a copy of the teacher evaluation sheet and lists of those who assisted in the study. (AF)

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the effectiveness of the use of foreign languages in teaching academic subjects

A RESEARCH CONTRIBUTION TO EDUCATIONAL PLANNING

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FL 001 302

DIVISION OF EDUCATIONAL RESEARCH • STATE DEPARTMENT OF EDUCATION • RICHMOND, VIRGINIA 23216

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FOREWORD

One of the functions of the Division of Educational Research is to conduct research to find answers to educational problems. Staff members of the Division also provide leadership and technical assistance for local school systems, institutions of higher education, and other divisions of the State Department of Education in planning, designing, and conducting research.

This study of "The Effectiveness of the Use of Foreign Languages in Teaching Academic Subjects" was conducted through the cooperative efforts of the Divisions of Educational Research and Secondary Education. Miss Helen Warriner, Supervisor of Foreign Languages, initiated the project and served as its director. Many persons in local school systems, the State Department of Education, institutions of higher education, and other education agencies contributed to the success of the project. Those who served as pilot study teachers are listed in Appendix B; others who assisted with the study are listed in Appendix C. Grateful appreciation is expressed to all who helped with the project.

In this study the foreign language was the primary, if not the exclusive, means of communication. The goals of instruction were those of the academic course rather than of language study.

One of the basic objectives of the project was to ascertain whether advanced students could apply their language skills, gained over a minimum of three years of study and by techniques emphasizing oral as well as written communication, to a practical purpose such as the study of an academic subject. Statistical evidence included in this report shows that students are capable of applying their linguistic skills to an academic subject. The statistics affirm, and teacher and student opinions support the conclusion, that students studying history in a foreign language learn approximately the same amount of language through usage as those studying languages and literature as separate courses.

It is hoped that this report will be useful to local school systems as they initiate and conduct research studies in a continuing effort to provide more effective instructional programs for students.

CHARLES E. CLEAR, *Director*
Division of Educational Research

SECTION I

THE PROBLEM, DEVELOPMENT OF THE STUDY, AND OBJECTIVES

The Problem

World War II caused the American people to realize that the use of foreign languages as a practical means of communication was in the national interest. Until that time the primary goals of language teaching had been reading and writing, and most high school language programs were confined to sequences of two years. After the war, curriculum changes were initiated to facilitate the acquisition of comprehension and speaking skills. At the high school level these changes included (1) extending two-year programs to longer sequences, (2) employing new methods of instruction based on the inductive approach to learning, and (3) using tapes, tape recorders, language laboratories, and other media.

The results were numerous and significant. Around 1960 foreign language enrollments began to increase; in some states the percentage of students studying foreign languages doubled or tripled over a period of three or four years. Foreign language classrooms became the setting for oral dialogues and drilling, often conducted almost exclusively in the foreign language. New languages such as Russian and Chinese were added. Although the changes in goals and techniques produced no magic results, many educators believe that during the past few years foreign languages have been taught with unprecedented success to a record number of students. Indeed, some of the high school graduates today with from three to eight years or more of study of a foreign language have become rather proficient in all four skills of that language.

Curriculum changes are rarely accomplished without problems arising, and the revisions that have been made in foreign language instruction have not been accomplished without some difficulties. One of those difficulties was that of selecting appropriate content to be dealt with by the increased number of students enrolled in foreign language classes. Teachers, trained in the literary classics of the languages that they were teaching, sometimes attempted to force this fare upon their students, many of whom had not yet encountered material of comparable literary style and level in their native language. A high percentage of dropouts occurred at various levels after the second year of high school language programs. Although many factors certainly contributed to the dropout problem, some educators believe that the use of too much reading material of one type and level before students are capable of dealing with it was and continues to be one of the major reasons for the attrition. Some students seem to be more interested in the practical, everyday values of language learning than in its humanistic outcomes. Many teachers began to realize that content needed to be broadened to include other worthwhile material of a non-literary nature, but little experience had preceded to assist in effecting this change.

Development of the Study

Origin

In Virginia the state foreign language supervisor discussed the possibilities of teaching an academic subject in a foreign language as early as 1964 with a city and a county foreign language supervisor who were administering language programs apparently yielding a high degree of success. The local supervisors were interested in the idea and believed that some of their students were capable of such instruction. They felt, however, that they were unable at that time to assume an additional duty which would require much of their time and a sizeable share of their budget. Approximately one year later, the state supervisor discussed the same idea with a foreign language specialist of the U. S. Office of Education who cited the need for research of this type. The state supervisor again approached the aforementioned local supervisors and two additional ones about the possibilities of initiating a pilot program in teaching an academic subject in a foreign language. They and their school administrators agreed that it would be feasible to attempt such research, if assistance were provided. The Division of Research of the Virginia Department of Education agreed to provide the necessary financial and consultative assistance, and the study was scheduled to be conducted betwen July 1, 1965 and June 30, 1967.

Selection of School Divisions

The State Department of Education in Virginia invited the cities of Alexandria and Richmond and the counties of Arlington and Fairfax to participate in the study. Each of them accepted the invitation. These school divisions were selected because of the following reasons:

1. Their language programs included sequences of a minimum of four years.
2. A foreign language supervisor was available in each division to coordinate the study (in three of the divisions, this person was a foreign language specialist).
3. They emphasized the comprehension and speaking skills as well as reading and writing and used teaching techniques and materials conducive to achieving these objectives.
4. Large numbers of advanced students were available from which to make up specialized classes.

Nature of Courses

The plan was to select academic courses in which instruction was to be given in a foreign language. The instructional objectives were to be those of the academic subject, biology or history for example, and language was to be incidental except as the means of communication.

Foreign Language in the Classroom

The foreign language was to be the primary, if not the exclusive, means of communication; and English was to be an infrequent intruder in the classroom. No time was to be devoted to studying vocabulary, practicing structure drills, or learning basic sentences except when those techniques would support learning in the academic subject. But, as no history teacher can avoid an explanation of "dialectical materialism" when the term arises in class, instructors in the special language classes were not to neglect new words or terms which the students did not understand by inference. The goals of instruction were to be those of the academic course rather than of language study.

Language Outcomes

Even though learning the foreign language was not to be the purpose of the instruction, student gains in language proficiency were anticipated. Just as native speakers of English become more skilled in using their language through reading and discussing history or any other subject taught in English, students with some knowledge of a foreign language studying history in that foreign language should improve their skills in the secondary language.

Nature of Students

Although the administrators and consultants working with the pilot study had confidence in the students' ability to meet the challenge of studying an academic subject in a foreign language, no one ever believed that the youngsters concerned could handle the foreign language with the ease of a native speaker. Obviously, therefore, the level of oral and written language used in the classroom was to be chosen carefully to assure that adequate communication would take place. It was understood that these pilot classes would not be identical in every respect to, for example, world history classes taught in English in an American high school or to mathematics classes taught in Spanish in Venezuela; however, every effort was to be made to approximate these natural situations.

Students were to be required to have a minimum of three years of high school credit in a foreign language or the equivalent. The equivalency provision was to allow the participation of persons who had studied a foreign language in elementary school for a number of years, who had lived abroad, or who had otherwise learned a language outside of the academic classroom.

Selection of Teachers

The teachers who would participate in the program were to be endorsed, according to Virginia certification standards, in both the content area of the course and in the foreign language used. They were to be sufficiently skilled in the foreign language to conduct all instructional activities in the language. In addition, they were to be considered superior teachers by their local administrators.

Measurement of Progress

Control groups were to be established for comparison with the pilot classes. Standardized pre-tests and post-tests in history and foreign languages were to be administered to help measure the achievement of the objectives of the study. An analysis of the results was to be made and distributed to those who were interested in the study.

The Objectives

The following were to be the basic objectives of the study:

1. To ascertain whether certain advanced students could apply their language skills, gained over a minimum of three years of study and by means of techniques emphasizing oral as well as written communication, to practical purposes; for example, to the study of an academic subject.
2. To compare the development of language proficiency in classes devoted to the study of an academic subject with that in regular foreign language classes concerned with conventional language and literature.

In addition to the basic objectives, several other concurrent benefits were to be desired for students enrolled in the pilot study classes:

1. To prepare students for reading original language documents, other primary sources, and literature related to the topic of study.
2. To provide a different insight into the study of history which is gained only through the presentation of the material in another language and from another point of view.
3. To emphasize the interdisciplinary relationship between two areas of study which are inherently related but whose relationship is frequently neglected.
4. To conserve time by permitting students to pursue two subjects simultaneously; for example, French and mathematics, Spanish and world history.
5. To develop a high degree of motivation towards foreign language study by applying acquired language skills to a utilitarian purpose.
6. To minimize the concept of "language for the language classroom."

Another concurrent benefit was to be sought for foreign language teachers and administrators: the acquisition of information which would assist those interested in broadening the scope of course content in foreign language.

SECTION II

DESIGN OF THE EXPERIMENT

When the pilot study was approved by the State Department of Education, it was developed as a two-year project. The first year was designated Phase I and the second as Phase II. Phase I was to be the planning phase, and Phase II was to be devoted to the conducting of the classes, the testing of the students, and the preparation of the summary of the study.

The pilot study was to be under the direction of the foreign language supervisor of the State Department of Education working in cooperation with the personnel of the Division of Research.

Phase I

Purposes

Phase I, from July 1, 1965, to June 30, 1966, was used for the following purposes:

1. To review other similar experiments.
2. To identify the classes to be conducted.
3. To make a decision concerning course credit.
4. To select teachers.
5. To appoint consultants.
6. To identify students to enroll in the classes.
7. To select texts and other teaching materials.
8. To prepare course guides.
9. To plan all standardized testing and other measuring procedures.
10. To develop in-service training sessions to equip teachers for the new professional experience.
11. To develop the budget.

Activities

All of the goals for Phase I were accomplished as follows:

1. *Review of similar experiments.* A study was made to obtain information from similar studies which might be used in the Virginia experiment. The following similar experiments were found:

Folsom Unified School District, Folsom, California—Biology was being taught as the basic content in first-year Spanish classes. Achievement was to be measured by comparing the experimental classes (biology-Spanish) with the control classes (the regular sections of biology and of first-year Spanish).

Carbon High School, Utah—Biology was being taught in German.

Indiana University—A course called "History of French Art" was in progress.

Cleveland High School, St. Louis, Missouri—Advanced geography was being taught in French to high school sophomores.

University of Minnesota—A course entitled European Political Integration was being conducted in German.

Shimer College, Illinois—Courses in French, German, Russian, and Spanish history were being required of students studying the Spanish language.

Point Loma High School, San Diego, California—World geography was being taught in Spanish.

Western New Mexico University, Silver City, New Mexico—Mathematics and science were being taught in Spanish.

Elbert Covell College, California—All courses in this college are conducted in Spanish. The institution is designed for Spanish-speaking persons who wish to receive their undergraduate education under the American system but who are unable or unwilling to do so in English at conventional institutions, and for Americans proficient in Spanish and who wish to perfect their use of the language by constant practice.

Junius H. Rose High School, Greensville, North Carolina—A world affairs class was being instructed in Spanish.

Most of the courses previously conducted or in progress at the time of the planning of the Virginia study were different from those of the Virginia study. Much information, however, concerning such matters as the selection of teachers, sources of materials, and teaching techniques was secured from the review of other experiments.

cialized vocabulary which might be necessary in English for subsequent college courses.

Each of the four school divisions, considering its own circumstances, advantages, and limitations, made a final choice independently of the others. The following table lists the classes designated:

TABLE I

School Divisions, Schools, Subjects and Languages Chosen

Division	School	Subject	Language
Alexandria	T. C. Williams	History of France	French
Alexandria	George Washington	History of France	French
Alexandria	Francis Hammond	History of France	French
Arlington	Wakefield	World History	French
Fairfax	Robert E. Lee	History of Latin America	Spanish
Fairfax	McLean	History of France	French
Richmond	Armstrong	The World in the 20th Century	French
Richmond	Thomas Jefferson	The World in the 20th Century	French

2. *Identification of Classes.* There was no predisposition on the part of any individual as to what academic subject or subjects should be taught. During initial planning meetings, teachers, supervisors, directors of instruction, assistant superintendents, and State Department of Education personnel considered many different subjects, including mathematics, biology, the humanities, art, music, physics, and history. However, in every case, history classes were selected. Reasons for this decision included the following:
   a. The availability of doubly certified teachers (language and an academic subject)
   b. The appeal of the topic to students. (Since in every case there were relatively few foreign language students with the desired degree of language proficiency, it was necessary to select courses which were not so specialized as to appeal to a limited number of students.)
   c. The need to avoid the repetition of courses previously taken by the students.
   d. The desire not to handicap students by choosing a subject with a highly technical or spe-
3. *The awarding of credit.* Participants in meetings during Phase I, recommended awarding two credits—one in the foreign language and one in the academic subject—if tests and evaluation procedures in each area indicated that the students had made gains comparable to those of their peers in the control sections. It was decided, however, that only one unit of credit could be awarded in order to comply with the unit credit system. The individual school divisions were allowed to decide in which course the credit would be given. Some of the divisions in turn permitted individual students in the pilot classes to indicate the course for which credit would be sought.
4. *The selection of teachers.* Division administrators chose the participating teachers, each of whom was certified in both the designated foreign language and in history. Two teachers expended their own time and money taking two additional college courses in history to qualify for endorsement and for participation in the study. A brief resume of the professional experience of each teacher is provided in Appendix B.

5. *The appointment of consultants.* Two consultants were secured to assist with the organization of the pilot study. Dr. Everett U. Crosby, assistant professor of history at the University of Virginia, consulted with those teaching history in French. Dr. Crosby who speaks French fluently has taught in French-speaking schools. His specialization is Western European history. Dr. C. Alan Hutchinson, associate professor of history at the University of Virginia, speaks Spanish fluently, and has concentrated in the field of Latin American history. Dr. Hutchinson and Dr. Crosby met with the teachers as a group on several occasions during Phase I. They advised teachers in their search for and selection of teaching materials, assisted with the planning of the course outlines, and advised concerning techniques for teaching history. They visited classes during Phase II for purposes of consultation and evaluation.

6. *The identification of students to enroll in the classes.* The following criteria were suggested as a basis for admitting students to the pilot study classes:

   a. A minimum of three years (unit credits) of foreign language study or the equivalent (for example, native speakers or students who studied a foreign language for several years in the elementary grades).
   b. Superior language ability and achievement.
   c. Recommendation of most recent language teachers.
   d. Superior academic performance in all areas of the curriculum.
   e. Good motivation and study habits.
   f. Recommendation of guidance counselor.

In addition, it was recommended that the following supporting information and data be secured:

   a. Signature of parent.
   b. Statement from student giving reasons for enrolling.
   c. Record of former foreign language study.
   d. Record of any non-scholastic foreign language experience.
   e. Record of previous social studies work.
   f. IQ, STEP, SCAT scores.

7. *The selection of texts and other teaching materials.* It was not easy to find books which were at the appropriate reading level suitable in content and style, and which were designed specifically for the courses being planned; for example, since in France the history of that country is taught in the elementary grades it was difficult to find a good text which was not too easy for the students. No course corresponding to "The World in the Twentieth Century" could be found in a French-speaking country. It was, therefore, necessary in almost every class to make some concessions or adaptations in the texts or course outlines.

The following textbooks were chosen for the classes:

World History

Danguillaume, G. et Rouable, M., HISTOIRE, PREMIÈRE ANNÉE. Paris: Dunod, 1965.

Danguillaume, G. et Rouable, M., HISTOIRE, SECONDE ANNÉE. Paris: Dunod, 1964.

Danguillaume, G. et Rouable, M., HISTOIRE, TROISIÈME ANNÉE. Paris: Dunod, 1965.

The World in the Twentieth Century

Bonifacio, A. et Meile, P., LE MONDE CONTEMPORAIN. Paris: Hachette, 1962.

History of France

Flandre, H. et Merlier, A., HISTOIRE DE FRANCE. Paris: Librairie Classique.

Maurel, B., Fay, B., et Equy, J., HISTOIRES DE FRANCE DES ORIGINES A 1610. Paris: J. de Gigord, 1943.

Maurel, B., Fay, B., et Equy, J., HISTOIRE DE FRANCE DE 1610 A NOS JOURS. Paris: J. de Gigord, 1943.

Blond et Gay. HISTOIRE DE FRANCE, ÉPOQUE CONTEMPORAINE (1815-1960). Belgique: Dascléa et Cie., Éditeurs, S. A. Tournai, 1960.

Latin American History

Sanchez, HISTORIA GENERAL DE AMÉRICA. Santiago de Chile: Empresa Ercilla, S. A., 1944.

Pattee, INTRODUCCÍON A LA CIVILIZACÍON HISPANOAMERICANA. Boston. D. C. Heath and Co., 1948.

In addition to the basic texts, many reference and supplementary materials were secured. Maps, filmstrips, magazines, newspapers, and other aids were available for most classes. Detailed lists of the teaching materials appear in the course outlines.

8. *The preparation of course outlines.* A course outline was developed for each of the subjects to be taught. Previously used outlines for World History and The World in the Twentieth Century were modified and adapted to accommodate the foreign language texts. No outlines existed for Latin American History and History of France, and teachers, the University of Virginia consultants, and the foreign language and history supervisors of the State Department of Education and of the school divisions collaborated to produce these materials. The four course outlines are available from the Supervisor of Foreign Languages, State Department of Education, Richmond, Virginia 23216.

9. *The planning of standardized testing and other measuring procedures.* The initial plan was to establish experimental and control groups. The experimental groups were to be the history classes taught in a foreign language. Each experimental group was to be matched with two different control groups:

a. One regular section of foreign language students studying conventional materials (literature and grammar).
b. One regular section of history students whose instruction was conducted in English.

The control group students were to be similar in all respects to those in the experimental classes. Standardized tests were to be administered to the experimental and control groups in September and May in order to measure achievement in both foreign language and history. The following problems encountered, however, caused some modifications in the plans:

a. The lack of standardized tests for History of France, the World in the Twentieth Century, and Latin American History.
b. The unavailability of history control groups for the History of France and Latin American History classes.

Since it was impossible to overcome the lack of certain history control groups or to develop the needed standardized tests before classes began, an alternative was developed: the two history consultants from the University of Virginia would observe each classroom several times during the year to evaluate progress. An observation guide-evaluation sheet was devised by the Supervisory of History, Government, and Geography of the State Department of Education as a limited means of standardizing the evaluative process. Other observers, such as the State and local foreign language and history supervisors, were also to make use of the guide when they visited the classes to provide a more ample sampling of observations during the school year. (The evaluation sheet is reproduced as Appendix A.) In addition, teachers used the guide in evaluating their own instruction.

To supplement standardized test information and observer evaluations, class grades were also to be used for measurement purposes.

A summary of the testing and evaluation procedures for each group follows:

a. The World in the Twentieth Century (Richmond)

French achievement:

Use of the Modern Language Association Cooperative Tests, Forms MA and MB, for pre-testing and post-testing, respectively; to be administered to experimental and control groups in September and May.

History achievement:

(1) Use of the evaluative criteria by the history consultants and other observers.
(2) Comparison of students' grades in the experimental and control groups (Grades were to reflect history achievement rather than language development).

b. History of France (Fairfax, Alexandria)

French achievement:

Use of the Modern Language Association Cooperative Tests, Forms MA and MB, for pre-testing and post-testing; to be administered to experimental and control groups in September and May.

History achievement:

(1) Use of the evaluative criteria by the history consultants and other observers.

(2) Comparison of students' grades in the experimental and control groups (Grades were to reflect history achievement rather than language development).

c. Latin American History (Fairfax)

Spanish achievement:

Use of the Modern Language Association Cooperative Tests, Forms MA and MB, for pre-testing and post-testing; to be administered to experimental and control groups in September and May.

d. World History (Arlington)

French achievement:

Use of the Modern Language Association Cooperative Tests, Forms MA and MB, for pre-testing and post-testing; to be administered to experimental and control groups in September and May.

History achievement:

(1) Use of the Cooperative Tests in World History, Forms LA and LB, for pre-testing, and post-testing; to be administered to experimental and control groups in September and May.
(2) Comparison of students' grades in the experimental and control groups. (Grades were to reflect history achievement rather than language development).
(3) Use of the evalulative criteria by the history consultants and other observers.

All standardized tests were to be scored by the Educational Testing Service.

10. *The provision of in-service training sessions for teachers.* Social studies supervisors at the State and division levels conducted several sessions or portions of meetings to prepare teachers with experience in language instruction for their task of teaching history. Following is a partial list of topics which were considered in these meetings:

a. The objectives of teaching history.
   1. To develop a knowledge of basic historical facts and to learn the relationship of those facts to basic understandings of our times.
   2. To teach students to recognize, approach, and solve problems.
   3. To develop certain skills:
      a. In critical thinking.
      b. In locating, gathering, organizing, and evaluating information.
      c. In speaking, listening, reading, and writing.
      d. In interpreting graphic material.
      e. In participating in group action and interaction.
   4. To develop in the students a sense of time, chronology, and space.
   5. To help students answer the question, "Who am I?"
   6. To help students develop a philosophy and and attitude toward life.
   7. To teach students that all people do not think alike and have the same reactions.

b. Methods of measuring student progress (sample test items presented and discussed).
c. Treating contrasting points of view as might be presented in texts of non-American authorship.
d. The selection of salient historical information from the quantity of available information.
e. Approaches to extensive reading in history.
f. Techniques of controlled writing on historical topics.

In addition to these activities, bibliographies on teaching of history were compiled and teachers were encouraged to do further reading and study. A lesser amount of time was spent on a discussion of certain foreign language teaching techniques which could be directly applicable to the teaching of new vocabulary, extensive reading, controlled writing, etc.

Topics for in-service training sessions were covered in formal presentations, panel discussions, informal discussions, and personal consultations.

11. *The preparation of the budget.* A budget providing financial assistance from the Division of Educational Research of the State Department of Education for the four cooperating school divisions was prepared by all of those involved in the study.

12. *The application for a Fulbright specialist.* An unanticipated opportunity to apply to the United States Office of Education for a Fulbright cur-

riculum specialist resulted in the assignment of Robert Berton, of Lyons, France, to assist with the conducting and evaluation of the pilot study classes taught in French. In this capacity, Mr. Berton was to be available to produce soundtracks of films in French, make tapes, occasionally talk to the classes, advise with the teachers as needed, assist with the evaluative process, and perform other duties requested by the teachers or coordinators.

13. *Selection of personnel and definition of duties.* In addition to the teachers previously identified, a complete list of personnel who assisted with the study is included in Appendix C. Their duties were defined during Phase I and are indicated in Appendix C.

14. *Planning meetings held.* State Department of Education personnel held numerous planning meetings and conferences during the year and, on several occasions, met with local administrators. Two one-day workshops, in which all personnel who were involved in the study participated, were held for planning during 1965-66. A three-day workshop in June, 1966, was designed primarily for in-service training for the teachers.

15. *Teaching of two classes (Arlington).* Because most of the planning for two Arlington classes was completed early, the classes were offered during Phase I. World History was taught in French by Robert Linse at Washington-Lee High School and by David MacIntyre at Wakefield High School in Arlington County. Information gathered from these early classes served to an advantage in the planning of the subsequent courses.

Phase II

Phase II began July 1, 1966, and terminated June 30, 1967. The primary activities of this period included:

1. The pre-testing of the students enrolled in the pilot and control classes.
2. The teaching of the classes.
3. Visits by the consultants.
4. The post-testing of the students enrolled in the pilot and control classes.
5. The preparation and distribution of a summary of the findings.

All of these activities were completed. During Phase II, the following additional personnel joined the study: another teacher, three assistant supervisors in the Division of Research of the State Department of Education, and an assistant supervisor of foreign languages in the Department's Division of Secondary Education. They are also listed in Appendix C.

Only one meeting was held during Phase II. This was a summary meeting in June, 1967, for a final discussion of the results and conclusions of the study. The discussion yielded much valuable advice and information, which is summarized in Section III, Evaluation, Teacher Evaluations, pp. 11-23.

The following table provides the names of school divisions, schools, classes, teachers and languages and the number of students actually engaged in the study.

TABLE II

School Divisions, Schools, Subjects, Teachers and Languages Selected, and Numbers of Students Enrolled

1966-67

Division	School	Subject	Teacher	Language	Number of Students
Alexandria	Francis Hammond	History of France	Mary N. Garrett	French	6
Alexandria	George Washington	History of France	Alberta Grant	French	13
Alexandria	T. C. Williams	History of France	Helen F. Staren	French	9
Arlington	Wakefield	World History	David MacIntyre	French	17
Fairfax	Robert E. Lee	History of Latin America	Peter Hatcher	Spanish	10
Fairfax	McLean	History of France	Catherine Deverall	French	21
Fairfax	Woodson	History of France	David W. Condit	French	24
Richmond	Armstrong	The World in the Twentieth Century	Ruth A. Taylor	French	19
Richmond	Thomas Jefferson	The World in the Twentieth Century	Ernest C. Perry	French	20

1965-66

Arlington	Washington-Lee	World History	Robert Linse	French	13
Arlington	Wakefield	World History	David MacIntyre	French	10

SECTION III

EVALUATION

Subjective

TEACHER EVALUATIONS

A questionnaire designed to summarize the nine teachers' opinions of the pilot study classes yielded much interesting information. Copies of the questionnaire were distributed in May, 1967, near the end of Phase II of the study. It was divided into two sections: foreign language and history. The questionnaire, which was also used as the basis for discussion at the summary meeting in June, 1967, is reported question by question below, with answers and comments of the teachers following each question.

*Foreign Language**

1. *Do you think that this has been a worthwhile experiment?*
   Yes ( ) No ( )
   Nine teachers responded "yes" and none "no".

2. *Has your class shown greater ( ) or less ( ) interest in the language because of the changed content?*
   Six teachers said their students showed greater interest, two indicated students were less interested, and one responded that there was no apparent difference. One teacher explained that she thought that the lack of complete fluency with which to express the historical concepts limited the students' interest to some extent.

3. *Were most of your students linguistically capable of undertaking the class?* Yes ( ) No ( )
   Seven teachers responded affirmatively and two negatively. One of the teachers responding negatively indicated, nevertheless, that students perhaps learned as much, did as well, and were as interested in the history class as they would have been in a language class of conventional content.

4. *Please rank general student performance in the four skills; the scale is 1-4, 1 representing the highest rank:*

   Comprehension ____ Speaking ____ Reading ____ Writing ____

TABLE III

Teachers' Ranking of Experimental Students' Performance in Four Language Skills*

RANK	Comprehension	Speaking	Reading	Writing
1.....	8	0	1	0
2.....	1	3	6	0
3.....	0	4	2	3
4.....	0	2	0	6

The majority of students made the most progress in comprehension, the teachers reported. Progress in reading ranked second, speaking ranked third, and writing, fourth.

5. *If you have (or previously had) a comparable section of language students using conventional texts and content, please rank them also; the code is 1-4, 1 representing the highest rank:*

   Comprehension ____ Speaking ____ Reading ____ Writing ____

*Note: All questions are concerned with the experimental rather than control classes unless wording indicates otherwise.

*Note: The numbers in columns two through five represent the number of teachers responding.

TABLE IV

Teachers' Ranking of Control Students' Performance in Four Language Skills*

Rank	Comprehension	Speaking	Reading	Writing
1.....	3	0	2	1
2.....	2	1	2	1
3.....	1	3	1	1
4.....	0	2	0	3
No reply	3	3	3	3

Since three teachers did not respond to this question, the results are less reliable. Drawing conclusions from the six respondents, however, comprehension was the skill best achieved, reading was second, and speaking and writing were developed to approximately the same level, ranking in third place.

6. *What changes would you make to improve the course?*

Four teachers indicated that they would make no changes. Others suggested the following alterations.

a. Care should be taken to frequently repeat, emphasize, and review important facts for purposes of reinforcement. The repetitions should be stated in various ways and with different vocabulary choices to provide students with more than one opportunity for comprehending.

b. The first several days of the course should constitute a warm-up session using historical information and vocabulary that students already know. This would make them feel comfortable in the language and class before they plunge into new material.

c. Care should be exercised not to use a quantity of new vocabulary or difficult structures when dealing with unfamiliar content.

d. Efforts should be made to have students read in advance much of the material to be discussed in class.

e. The technique of dividing the class into small groups for specific purposes should be employed, and the physical arrangement of the classroom should lend itself to this kind of activity. The strongest students should be used as leaders.

f. A student's study guide for specific lessons, containing questions or directions which focus on the most important points of the lesson or homework assignments, should be provided periodically.

g. A supply of library reference materials would be a distinct advantage. (These were limited in specialized areas, such as Latin American history, which had never been taught before in Virginia schools.)

h. More appropriate texts should be sought. The following inadequacies or problems were observed in two of the books:

History of France

(1.) The text did not include material covering the period after 1960.
(2.) The vocabulary was sometimes too difficult and technical.
(3.) The content was very factual and at times dull.

History of Latin America

The nature of the text was philosophical and not interesting to high school students.

i. More student participation should be stimulated or included in the approach to instruction. Panels, debates, oral reports, and other such activities would reinforce the oral language skills and contribute to better history instruction.

j. More short research papers should be assigned to fulfill the interests of students and to reinforce the writing skill.

k. A reference grammar book should be in the hands of all students for correction of errors, seeking information, and refreshing the memory.

l. The courses should be organized and the presentation of material timed to provide opportunity for adequate attention to the contemporary period.

*Note: The numbers in columns two through five represent the number of teachers repsonding.

m. Some details should be eliminated in order to put more stress on the significance and relevance of the salient points of history.

n. Solutions should be sought for the problem of insufficient time for correcting oral and written mistakes in language usage.

o. The use of foreign students and other resource persons should be increased.

p. Students should not read oral reports but should speak from notes or memory.

q. Perhaps student maturity should be considered along with the other criteria for admitting students to classes taught in a foreign language. (In classes which contained tenth through twelfth-grade students, the varying degree of maturity of the various individuals caused some problems.)

r. Teachers selected should be superior in all respects, especially in language proficiency, ability to teach a foreign language, knowledge of subject matter and ability to teach that subject matter.

s. Topical rather than chronological treatment of the teaching of history would eliminate insignificant detail and would emphasize the importance and relevance of people, places, dates, and events, and their relationships to one another.

t. The presentation of topics from different points of view should be fully utilized; for example, a study might be made of the French Revolution as it was viewed by the king, the nobility, the middle class, the clergy, and the peasantry. Greater objectivity and more skillful critical thinking would result.

History

1. *Do you feel that conducting classroom discussions about historical topics in the foreign language enhanced or inhibited the discussions?*

   Enhanced—6
   Inhibited—2
   Ambivalent opinion—1

   When this question was discussed in the evaluative session, four teachers indicated that, in their opinion, limited historical background was a greater handicap than lack of fluency in the language. It was recognized, however, that lack of fluency limited to some degree the teaching of conceptual thinking.

2. *To what extent was the quantity and/or quality of supplementary materials a factor in instruction?*

   Seven of the nine teachers indicated that there should have been more supplements available. Background or extensive reading material in the foreign language was a major deficiency, and reading and research were sometimes done in books written in English because foreign language materials were not available. Although the lack of adequate supplements was one of the more severe problems, most of the teachers sought and found ways of preventing this problem from becoming a major deterrent to the success of the instruction.

3. *To what extent did students make use of biography and primary sources?* Four teachers reported their students used these materials extensively. One teacher reported that her students did at least 50 percent of their reading in books and materials other than the basic text. Two teachers indicated moderate use of them, and three said that they did not use these references frequently or did not have them to use.

4. *To what extent were films, filmstrips, transparencies, and other audio-visual aids used?*

   Five teachers made extensive use of these aids; three, moderate; and one, limited use. All but one of the nine teachers felt that the use of such aids was very effective or would have been effective had a better supply of good materials been available. Several of the teachers were highly pleased with the quantity and quality of supplements which they were able to acquire and use. They felt that these materials, especially the visuals, made a significant contribution to the interest which students developed in the topics and to the knowledge which they gained.

5. *Did students acquire a reasonable knowledge of the extent of the country/countries studied? Did they develop valid generalizations and concepts?* Seven teachers gave an immediate affirmative answer to this question. The other two thought that their students had achieved these benefits. In the opinions of the teachers, concepts and generalizations were well treated.

6. *To what extent were students able to express relationships and point out valid generalizations and concepts in the foreign language?*

These responses can be summarized thus:

Restricted–1
Limited at first, improved to point of being natural–2
Moderately well–3
Well–1
Quite well–1
Very well–1

With one exception, the teachers did not view the use of the foreign language as an encumbering handicap in this regard.

7. *Did you feel that studying the history of a country in the language adds a dimension to the study?*
All nine teachers reported that a foreign language does add a new dimension to the study of history. Several of the answers contained qualifying remarks such as "indeed," "definitely," or "the students also think so." One teacher commented that adequate teaching materials must be available for the foreign language to be an asset. A primary advantage of the language seems to be the access to other peoples' points of view. These points of view stimulated provocative discussion and thinking, student evaluation of them, and a new and more objective concept of the study of history.

8. *Do you feel that students did some of their outside preparation by using materials written in English?*
The answer to this question by all nine teachers was affirmative. The lack of a complete supply of materials in the foreign language necessitated some study in English. Fewer good supplements were available for the class in Spanish than for the classes in French.

9. *Do you feel that the dual function of the course (history and a foreign language) caused you to rely more or less heavily upon a single text as the primary source of information?*
Five instructors indicated that they relied less heavily on a single text. Two teachers were more dependent upon it. Two others responded "yes" or "no," answers which could not be interpreted.

10. *Do you feel that some students concentrated more on improving their language competencies than on the learning of history?*
All instructors reported that the students' main objective was history.

11. *To what extent did you use short answer tests? Essay tests? What other types of evaluation did you use?*

	Many	*Some*	*Few*
Essay	6	3	
Short Answer	1	3	3

In addition, two teachers reported the use of oral quizzes and tests for evaluative purposes. It was suggested that essay questions should be structured to elicit the needed information, concepts, analogies, etc., concerning a given topic rather than the scope of the students' knowledge. Short-answer tests should analyze concept development rather than provoke simple recall or association type answers. Several teachers acknowledged inadequacies in evaluating group work and oral activities of various kinds.

12. *To what extent did students improve their skills of analytical thinking?*
All nine teachers indicated that their students made at least some gains in the ability to think critically. One teacher, however, was of the opinion that his students came to him at the beginning of the year with good preparation in this area; nevertheless, he thought this skill was further developed in the experimental class.

13. *To what extent did students improve their skills of map interpretation?*
Five teachers indicated that some progress was made in map interpretation, however, it seems to have been limited in most cases. At least two teachers did not have an adequate supply of maps; others did not emphasize this skill or were not successful in teaching it. Lack of emphasis appeared to be the problem in most cases. Two teachers did not report on map usage.

14. *To what extent did students improve their skills in participating in group work?*
Four teachers reported that group work improved. Responses ranged from "slight progress" to "definite progress." One teacher's classroom was so small as to limit group work; the other four teachers did not reply.

15. *To what extent did students improve their skills in evaluating sources of information?*
Three teachers indicated that some improvement was made in this area and a fourth response was enthusiastically affirmative. One teacher said that the skill of evaluating sources of information was

not one of his objectives. The other several teachers did not respond to this question.

Student Evaluations

In May or June, 1967, six of the teachers asked their students to write a summary of their observations and opinions regarding the pilot study classes. The students displayed much candor in their criticisms and praise. Summaries of all of the students' opinions have been prepared. Every effort was made to retain the students' intended meaning; students' wording was used in many cases. The number after each comment indicates the number of students making this observation.

Class A (37% response)

Positive

1. Shall never forget the experience–2
2. Excellent teacher–7
3. Liked or enjoyed the class–4
4. A valuable experience–2
5. Interesting experience–3
6. A challenge–2
7. Worthwhile–2
8. Learned grammar and history–1
9. Knowledge of history improved–2
10. A better language student because of experience–1
11. Vocabulary has expanded–8
12. Pronunciation has improved–1
13. Discussion of history provides much use of grammar–1
14. Reading has improved–1
15. Comprehension has improved–2
16. Learned to apply himself–1

Negative

1. Needed broader vocabulary to participate –3
2. Need more work in grammar–1
3. Did not wish to take course–2

Neutral

1. Difficult course–3
2. Course content was a surprise–1
3. Different–1

Advice

1. Students shouldn't get behind–1
2. Students should be allowed to choose between the regular language course and the language course having history as its content–1

Class B (94% of students responded)

Positive

1. History provides greater usage of language –4
2. Worthwhile course–8
3. Most interesting language class studied–3
4. Interesting class–2
5. History and language studied together saves time–4
6. Through usage, language is seen as a whole rather than being fragmented through analysis–1
7. Use of language on documentary (practical) basis helpful–3
8. Have learned more history although have had course previously–1
9. Foreign point of view through language is asset–5
10. History in foreign language is better than history in English (point of view)–1
11. Learned much history–6
12. Learned much language–5
13. Vocabulary has improved–6
14. Comprehension has improved–4
15. College Board score improved significantly –1
16. Reading has improved–3
17. Writing has improved–2
18. Variety of techniques, media helpful–2
19. Grammar as well as history is learned–1
20. Supplementary reading is good–1

Negative

1. Not enough general class discussion used–5
2. Facts and statistics should be deemphasized –1
3. Text is not good–3
4. More grammar is needed–1
5. Better and more supplementary materials needed–2
6. Pronunciation and speaking have not improved–1

Neutral

1. English is made difficult after so much French–1
2. History is student's primary interest–1

Advice

1. Students should be selected for course–1
2. Should study beyond facts and data–1

Class C (84% of class responded)

Positive

1. Good course–6
2. Most interesting course ever–4
3. History more interesting because of foreign language–2
4. Learn more foreign language by studying history–1
5. Language enhances study of history–2
6. Should be continued–1
7. Wants more similar courses–1
8. Should be offered to all language students –1
9. Combining history and foreign language is successful–1
10. Glad to participate–1
11. Enjoyable–1
12. Worthwhile–1
13. Class not held back by slow students–1
14. More interesting than regular foreign language course–1
15. Challenging course–1
16. Not as boring as grammar class–1
17. Grammar practical in usage–1
18. Good class participation–3
19. Learned history (and geography)–3
20. Learned history and language–2
21. Reading improved–3
22. Speaking improved–2
23. Vocabulary improved–2
24. Comprehension improved–4
25. Writing improved–1
26. Interesting teacher–2
27. Teacher's tests are thought provoking–1
28. Controversial issues stimulate opinion forming–1

Negative

1. Not enough emphasis on language–4
2. Text is choppy, boring, inferior–9
3. More discussion on current events needed –2
4. Scope of content should be narrowed–1
5. More audio-visuals needed–1
6. Prefer to take history in English–1

Class D (67% of students responded)

Positive

1. Worth taking in many respects–3
2. Learned foreign language and history–1
3. Use of language became natural–2
4. French didn't seem like a foreign language –1
5. Good course–1
6. Should be continued for other students–1
7. Speaking improved–1
8. Writing improved–1
9. Understanding improved–1
10. Reading improved–1
11. Teacher's presentation good–2
12. Foreign point of view is an asset to study history–2
13. Foreign language is an asset of study of history–1
14. Enjoyed oral and written reports–1
15. Good supplements–2
16. References are good–1
17. Book is informative–1

Negative

1. History needs to be reorganized to permit more study of 20th century–3
2. Too much emphasis on social and economic issues–1
3. Some films a waste of time–1
4. Language made history a little confusing –1
5. Text not well written–1

Neutral

1. Having history previously helped–1

Class E (71% of students responded)

Positive

1. Quite profitable–3
2. Has great potential–2
3. Foreign point of view is best aspect of course–1
4. Feel more at ease with language–1
5. Very interesting–1
6. History added depth to study of French–1
7. Content correlates with other courses–1
8. Use of language is practical–1
9. History has advantage over regular language courses–2
10. Speaking and writing are more flexible–1
11. Writing improved–1
12. Saves time–1
13. Excellent course–1
14. Best language course ever–1
15. Method of teaching was good–1
16. Learned language and history–1

17. Debates, reports, filmstrips, etc. are good activities—1

Negative

1. Text boring, detailed—9
2. More and better supplements and primary materials needed—6
3. Would have preferred regular language course—3
4. History schedule needs to be adjusted—3
5. Students' language preparation inadequate
6. Knowledge of grammar has terminated—2
7. Need some grammar work—2
8. Class should be more interesting—2
9. More independent study needed (on major themes)—2
10. History needs broader application—1
11. Should use fewer monotonous filmstrips—1
12. Better use of filmstrips needed—1

Class F (60% of students responded)

Positive

1. Understand better the influence of the past on the present—3
2. Use of language makes history real—1
3. Use of language makes study of history less cold and impersonal—1
4. Controversies aided critical thinking—1
5. Learned objectivity of thinking—1
6. Greatly increased vocabulary—1
7. Most definitely worthwhile experiment—2
8. Worthwhile opportunity—2
9. Discussion best aspect of class—1
10. Language makes history more interesting—1
11. Expression in language has improved—1
12. History study most interesting aspect of class—1
13. Language provides more insight into people and history—1
14. Enjoyable challenge—1
15. Essay tests improved critical thinking—1
16. Language preparation was adequate—1
17. One becomes more easily involved through foreign language—1
18. Much creativity involved through oral self-expression, book reports, research—1
19. Vocabulary improved—1
20. Writing improved—1
21. Speaking improved—1
22. Learned basic historical concepts—2
23. Enjoyed research and book reports—1

Negative

1. Difficult and dull text—9
2. Critical thinking didn't improve much—3
3. Need broader vocabulary for discussion—1
4. Language skills have decreased—2
5. Lack of vocabulary impaired note taking until vocabulary increased—1
6. Field trips needed—1

Neutral

1. History was major objective of course—4

Students in this class who submitted an evaluation ranked the achievement of language skills in the following order:

TABLE V

Experimental Students' Ranking of Their Performance in Four Language Skills*

Rank	Comprehension	Speaking	Reading	Writing
1st.....	3	0	1	1
2nd....	0	3	2	0
3rd....	1	0	1	3
4th....	1	2	1	1

Divergence of opinion is evident, but comprehension and reading seem to have received slightly higher over-all rankings than speaking and writing.

Consultant Evaluations

According to the evaluation procedure outlined in Section II (The Planning of Standardized Testing and Other Measuring Procedures [pp. 7-9] each pilot study class was visited on a number of occasions during the year and evaluated by the observers. The number of visits to each class varied. Division and State supervisors of foreign languages and of history, division and State research specialists, the Fulbright curriculum specialist, and the consultants from the University of Virginia served as observers. The set of criteria for evaluating each class appears in Appendix A. In addition to the 11 criteria, written criticisms were added at the end of many of the evaluation forms.

*The numbers in columns two through five represent the number of students responding.

Following is a summary of the observers' evaluations and comments concerning each class. Direct quotations of the observers are used.

Classes A-F below correspond to classes A-F of the student evaluation, Section III, pp. 15-17. A similarity in student and adult evaluations is evident.

Class A—evaluated 6 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage		4	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues		2	
4. Teacher's knowledge of content		3	
5. Student knowledge of content		2	2
6. Significance, relevance of ideas, events		1	2
7. Student participation, interest		2	2
8. Student understanding of content		1	2
9. Development of critical thinking		2	1
10. Evaluation			1
11. Use of variety of materials		4	
	—	—	—
		21	10

Positive

1. Teacher's French is outstanding.
2. Teacher worked hard and had much enthusiasm.
3. Teacher is well-informed, enthusiastic.
4. Excellent French.
5. Class has improved since beginning of year.
6. The teacher was well-informed . . .; command of the French language was *very* good.
7. Teacher doing her best.

Negative

1. Not a good class. (Meaning the students were not ready for such instruction.)
2. Too much material, presents too much detail.
3. Teacher needs more thorough knowledge of history.
4. The class was extremely dull and unresponsive.
5. Students' usage of language is very weak.
6. . . . Text is too difficult for these students.
7. A description of facts only was involved.
8. Students lack sufficient knowledge to benefit fully . . .
9. . . . language is a barrier for these students.

Advice

Adjustment of techniques needed; overwhelming detail.

Class B—evaluated 5 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage	1	4	
2. Attention to major civilizations	1	3	
3. Cultural, economic, intellectual, social issues	1	4	
4. Teacher's knowledge of content	3	2	
5. Student knowledge of content	1	4	
6. Significance, relevance of ideas, events	1	3	1
7. Student participation, interest	1	3	
8. Student understanding of content	1	2	
9. Development of critical thinking	1	2	1
10. Evaluation	1		
11. Use of variety of materials	3	1	
	—	—	—
	15	28	2

Positive

1. The teacher's French is outstanding . . . sets the students an excellent example of the goal . . .
2. . . . students' comprehension and fluency are quite good.
3. . . . good student response . . .
4. . . . good command of subject matter on the part of the teacher.
5. Interesting presentation.
6. Good student-teacher relationship.

*See Evaluation Sheet Item Numbers, Appendix A.

7. Excellent command of French.
8. Good command of subject matter.
9. Obviously the teacher is very experienced.

Negative

1. The teacher lacks techniques and methods for involving pupils, enlivening the course, and relating the past to present-day conditions, events, etc.
2. Class seemed boring; only pupils with individual reports seemed interested.
3. A map would have been useful. Students kept wandering in late after bell had rung.

Class C—evaluated 13 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage	8	5	
2. Attention to major civilizations	7	4	
3. Cultural, economic, intellectual, social issues	11	2	
4. Teacher's knowledge content	10	3	
5. Student knowledge of content	1	10	
6. Significance, relevance of ideas, events	6	7	
7. Student participation, interest	7	5	
8. Student understanding of content	3	8	
9. Development of critical thinking	10		
10. Evaluation	3	8	
11. Use of variety of materials	6	4	
	72	56	

Positive

1. French is outstanding.
2. Excellent class.
3. Teacher energetic, enthusiastic.
4. Just the right amount of tension.
5. Drills vocabulary usage well.
6. Interesting variety.
7. Good class response.
8. Excellent class, excellent teacher.
9. Good exam, but too many fill-in blanks, not enough essay.
10. Stimulating, much student participation.
11. Independent, creative thinking.
12. An exciting class.
13. Excellent.

Negative

1. A good class but too much grammatical review; not as interesting as in the fall.

Class D—evaluated 3 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage	1	1	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues	1	1	
4. Teacher's knowledge of content		2	
5. Student knowledge of content	1	1	
6. Significance, relevance of ideas, events		2	
7. Student participation, interest		2	
8. Student understanding of content		2	
9. Development of critical thinking		2	
10. Evaluation			
11. Use of variety of materials	1	1	
	4	14	

Positive

1. Good class.
2. Teacher well organized.
3. Student participation frequent, sometimes voluntary.
4. Student interest seems high.
5. . . . an above average class but there was nothing outstanding about it.
6. Good French.
7. Good participation.
8. Good supplementary reading.

Advice

1. Complete answers should be insisted on.
2. Need to relate, compare, show significance.
3. Student-teacher relationship could be improved, although it's not bad now.

*See Evaluation Sheet Item Numbers, Appendix A.

Class E—evaluated 5 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage		5	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues		3	
4. Teacher's knowledge of content		5	
5. Student knowledge of content		3	2
6. Significance, relevance of ideas, events		2	3
7. Student participation	1	2	2
8. Student understanding of content		3	2
9. Development of critical thinking	1	2	1
10. Evaluation		1	
11. Use of variety of materials	4	1	
	6	27	10

Positive

1. It (lesson) prepared by students was well prepared and very instructive.
2. The teacher is well prepared . . .
3. Student language usage good . . .
4. . . . many questions asked and most answered.
5. (The teacher) presented the work in an interesting manner . . .
6. It seemed to me that what . . . (the teacher) was doing was entirely satisfactory.

Negative

1. Does not correct student mistakes.
2. Students listen to talks in "questionable" French.
3. . . . needs to explain new words, concepts.
4. . . . noticed some errors in French on tests —(the teacher) had prepared . . .
5. Not enough students are involved.
6. . . . pupils are apparently not motivated; they seem to be rather inattentive, bored.
7. A little too much new vocabulary without sufficient usage . . .
8. Too many factual questions.
9. With an abundance of enrichment materials which the teacher has procured . . . , much more exciting teaching could be done.
10. The teacher appeared to be detached . . .
11. Rapport is not good but perhaps irremediable.
12. Some parts of lesson are disjointed.

Advice

1. Amount of time on certain topics could be cut down.

Neutral

1. Students seemed absorbed in the subject, although not many questions were asked.
2. Not bad.

Class F—evaluated 4 times

Evaluation Sheet Item Number *	*Outstanding*	*Satisfactory*	*Unsatisfactory*
1. Content coverage	1	2	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues	1	3	
4. Teacher's knowledge of content	2	2	
5. Student knowledge of content	1	2	1
6. Significance, relevance of ideas, events	1	2	1
7. Student participation, interest	1	1	2
8. Student understanding of content		3	
9. Development of critical thinking	1	2	1
10. Evaluation		1	1
11. Use of variety of materials	1		2
	9	18	8

Positive

1. Teacher displayed very good knowledge of material; did not have to use notes.
2. Good class participation.
3. Very high enthusiasm from students and teacher . . .
4. One of the healthiest classes I've ever seen . . .

*See Evaluation Sheet Item Numbers, Appendix A.

Negative

1. . . . teacher and class rely . . . heavily on the textbook.
2. Testing not good from language point of view; not sufficiently controlled.
3. Language somewhat weak (teacher).

Neutral

1. . . . major problem is a lack of sufficient material with which to conduct the course.

Advice

1. . . . better text is needed.
2. Teacher needs to use more variety to elicit discussion.

Class G—evaluated 4 times

Evaluation Sheet Item Number *	*Out-standing*	*Satis-factory*	*Unsatis-factory*
1. Content coverage		2	1
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues		1	2
4. Teacher's knowledge of content		1	2
5. Student knowledge of content		1	2
6. Significance, relevance of ideas, events		1	2
7. Student participation, interest			3
8. Student understanding of content			2
9. Development of critical thinking		1	3
10. Evaluation			
11. Use of variety of materials		1	
	—	—	—
		8	17

Positive

1. Good use of vocabulary

Negative

1. . . . teacher asked very elementary questions.
2. No conclusions drawn from filmstrip.
3. Teacher read from text with few explanations or elaborations.
4. . . . teacher's delivery is ineffective.
5. Students are allowed to answer in English quite often.
6. There could have been more intellectual tension in this class.
7. I suspect students can perform better than they are being asked to do.
8. . . . elementary and conducted haphazardly.
9. . . . materials for enhancement not used to good advantage.
10. No challenge for students.
11. Questions and answers sometimes not in target language.

Neutral

1. Students are attentive but not very responsive.

Advice

Students shouldn't get credit in history.

Class H—evaluated 5 times

Evaluation Sheet Item Number *	*Out-standing*	*Satis-factory*	*Unsatis-factory*
1. Content coverage		3	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues		3	
4. Teacher's knowledge of content		3	
5. Student knowledge of content		1	
6. Significance, relevance of ideas, events		3	
7. Student participation, interest		2	
8. Student understanding of content		1	
9. Development of critical thinking		2	
10. Evaluation		2	
11. Use of variety of materials		3	
	—	—	—
		23	

*See Evaluation Sheet Item Numbers, Appendix A.

Positive

1. The teacher speaks excellent French, and the students ask their questions in quite creditable French.
2. The lesson is taught in the way of questions and answers, which makes it interesting to follow.
3. This was a very good class, indeed.
4. The class is attentive and fairly fluent and seems greatly interested. . .
5. Excellent command of French.
6. . . . has prepared subject matter very, very well.
7. Students are learning.
8. Students seem prepared and confident.
9. Students took test calmly and wrote quite a bit with little hesitation.

Negative

1. Too many short questions and answers.
2. Too many . . . long essay type responses on tests.

Advice

1. Needs . . . different techniques for greater student participation.

Class I—evaluated 5 times

Evaluation Sheet Item Number *	*Out-standing*	*Satis-factory*	*Unsatis-factory*
1. Content coverage		4	
2. Attention to major civilizations			
3. Cultural, economic, intellectual, social issues		4	
4. Teacher's knowledge of content		4	
5. Student knowledge of content		4	
6. Significance, relevance of ideas, events		3	
7. Student participation, interest	1	1	2
8. Student understanding of content		1	
9. Development of critical thinking		1	2
10. Evaluation			
11. Use of variety of materials	1	1	1
	2	23	5

*See Evaluation Sheet Item Numbers, Appendix A.

Positive

1. . . . good knowledge and understanding of French although not fluent.
2. Class participation has improved since earlier lesson observed.
3. Responsive class.
4. The teacher has extensive vocabulary.
5. Students attentive and serious but not excited.

Negative

1. . . . appeared as though limited preparation had been made for day's lesson. (teacher)
2. Heavy reliance upon textbook.
3. Very dull class, no discussion; no spark.
4. No classroom decoration.
5. Too many lapses into English.
6. French mistakes not corrected.
7. Not enough apparent interest in political history.

Advice

1. More student participation needed.
2. Words and concepts need to be taught more thoroughly.
3. Significance of historical information needs to be pointed out.

TABLE VI

Summary of Consultant Evaluations of Classes*

Class	Visits by Evaluators	Out-standing	Satis-factory	Unsatis-factory
A	6	0	21	10
B	5	15	28	2
C	13	72	56	0
D	3	4	14	0
E	5	6	27	10
F	4	9	19	8
G	4	1	8	17
H	5	9	23	0
I	5	2	23	5
Total	50	118	219	52

*The numbers in columns three through five indicate the number of times each teacher received a comment of outstanding, satisfactory, or unsatisfactory.

The majority of the evaluations fall into the satisfactory column. Of the other two choices possible, more than twice as many evaluations were assigned to the outstanding category than to the unsatisfactory category. These responses indicate that the evaluators were generally pleased with the quality of teaching and learning which they observed.

TABLE VII

Experimental and Control Students' Grades by Percentages

Class	A	B	C	D	F
A Experimental	0	21	26	32	21
Language Control	0	18	41	30	11
B Experimental 66-67	33	53	14		
Experimental 65-66	73	27			
Language Control 66-67	6	20	27	47	
Language Control 65-66		40	60		
History Control 66-67	25	25	50		
History Control 65-66	6	20	24	50	
C Experimental	42	37	16	5	
Language Control	20	48	24	8	
D Experimental*	58	14	28		
E Experimental*	24	48	24	4	
F Experimental*	50	40	10		
G Experimental*	31	38	31		
H Experimental*	36	64			
I Experimental*	12.5	30	42	12.5	
J Experimental	46	38	16		
Language Control	86	14			
History Control	18	73	9		

One might conclude from this evidence that students in the experimental classes achieved equally as well as their counterparts in the control classes. Most of them seem to have performed satisfactorily; in only one school were there failures, and these occurred in both experimental and control groups.

In all cases where it was possible to compare experimental and control groups, the grades of the various groups seem to be similar. The differences are too slight to bear meaningful analysis of differences.

* No control group available.

A Language Control 66-67 A B C D F

ANALYSIS OF DATA

Systems Used

Two systems were used in the analysis of the language data from this study: the student "t" test and the multiple linear regression technique. Only one technique, the student "t" test, was used to analyze the history data.

Student "t" Test

The initial analysis of the data involved the comparison of both pre-test and post-test language scores of students representing the various groups involved

in the study. This comparison was made on the four subtests of the MLA test (comprehension, speaking, reading, and writing) as well as the World History test (for students in world history classes). The statistic used was the student "t" test, and the comparison was between the control and experimental groups.

Pre-test scores for the two groups (control and experimental) were analyzed for all test areas to determine if there were any significant differences. If there were no statistically significant differences between the pre-test scores, post-test scores were also compared to detect significant differences between groups after exposure to the experimental treatment. In cases where the pre-test scores showed the groups to be unequal at the beginning of the study, there were no comparisons made of post-test scores.

The data were analyzed by the Olivetti Underwood Programma 101. The Programma 101 can be programmed to analyze raw scores in terms of the "t" test to detect statistical differences. The program furnishes the mean, the standard deviation, and the t-value existing between two sets of raw scores entered.

Multiple Linear Regression Technique

Additional analyses of the data were conducted by using a multiple linear regression technique developed by Bottenberg and Ward* which has been adapted for computer analysis. With this approach, analysis of variance was used to compare the gain in achievement between groups, as evidenced from pre-test and post-test scores for the sub-areas of the MLA test. In this approach, other variables which may have influenced student achievement were included as well as the experimental treatment in the analysis. An advantage of using the multiple linear regression technique was that normal distribution for each variable did not have to be assumed. Another advantage was the ability to use categorical and continuous data simultaneously in the analysis.

The following information, when available for each student, was prepared for analysis by data processing techniques:

Continuous Criterion Variables

Student gain in achievement as evidenced by pre-test and post-test scores on:
- MLA—Comprehension
- MLA—Speaking
- MLA—Reading
- MLA—Writing

Categorical Independent Variables

- Student membership in control group
- Student membership in experimental group

Continuous Independent Variables

- Course Grade
- I.Q. Score
- SCAT Verbal Score
- SCAT Quantitative Score
- STEP Social Studies Score
- STEP Reading Score
- STEP Listening Score
- STEP Writing Score
- STEP Mathematics Score
- Previous Language Grades—2-year average
- Previous Language Grades—3-year average
- Previous History Grades—2-year average

The statistical procedure involved the use of a full model (including all available variables) compared with various restricted models, each restriction leaving a different variable out of the statistical comparison. The analyses indicated that the only variable contributing significantly to the achievement gain on the various criterion variables was membership in either the control or experimental groups. Significance was determined in terms of analysis of variance (report as F-ratio as each of the predictors was, in turn, left out of the linear regression).

*Bottenberg, Robert A. and Joe H. Ward, Jr. *Applied Multiple Linear Regression.* Lackland Air Force Base, Texas: 6570th Personnel Research Laboratory, 1963.

ARLINGTON

TABLE VIII

A Comparison of Control and Experimental Group Pre-test Scores on Four Skills of MLA Tests for Arlington During 1966-67 by Means of Student "t" Test

Skills	Control (n = 13)		Experimental (n = 17)		"t" Value	Degree of Freedom	Mean Difference
	$\overline{X}$	S.D.	$\overline{X}$	S.D.			
COMPREHENSION	176.9	11.7	175.5	8.9	0.35	28	n.s.*
SPEAKING	166.9	7.3	165.8	7.1	0.41	28	n.s.
READING	179.8	7.1	178.6	8.3	0.38	28	n.s.
WRITING	170.1	7.3	171.9	8.7	0.60	28	n.s.

TABLE IX

A Comparison of Control and Experimental Group Post-test Scores on Four Skills of MLA Tests for Arlington During 1966-67 by Means of Student "t" Test

Skills	Control (n = 13)		Experimental (n = 17)		"t" Value	Degree of Freedom	Mean Difference
	$\overline{X}$	S.D.	$\overline{X}$	S.D.			
COMPREHENSION	181.5	8.6	184.3	9.5	0.85	28	n.s.
SPEAKING	170.4	7.0	169.0	9.7	0.43	28	n.s.
READING	183.6	5.9	179.4	10.3	1.33	28	n.s.
WRITING	174.2	8.7	177.6	8.0	1.11	28	n.s.

* Not significant.

TABLE X

A Comparison of Control and Experimental Group Pre-test Scores on Four Skills of MLA Tests for Arlington During 1965-66 by Means of Student "t" Test

Skills	Control (n = 31)		Experimental (n = 31)		"t" Value	Degree of Freedom	Mean Difference
	$\overline{X}$	S.D.	$\overline{X}$	S.D.			
COMPREHENSION	181.2	6.8	182.1	5.6	0.57	60	n.s.
SPEAKING	165.5	6.6	166.6	5.5	0.75	60	n.s.
READING	181.0	6.8	180.4	6.9	0.35	60	n.s.
WRITING	175.2	7.2	175.7	6.4	0.26	60	n.s.

TABLE XI

A Comparison of Control and Experimental Group Post-test Scores on Four Skills of MLA Tests for Arlington During 1965-66 by Means of Student "t" Test

Skills	Control (n = 31)		Experimental (n = 31)		"t" Value	Degree of Freedom	Mean Difference
	$\overline{X}$	S.D.	$\overline{X}$	S.D.			
COMPREHENSION	187.8	7.9	188.7	6.7	0.48	60	n.s.
SPEAKING	172.1	6.4	171.9	6.2	0.14	60	n.s.
READING	185.7	9.7	185.4	7.7	0.14	60	n.s.
WRITING	179.7	7.2	179.4	6.6	0.17	60	n.s.

The data show that during two years, 1965-66 and 1966-67, there were no significant differences, as measured by the MLA pre-tests, in any of the four skills of students in the control and experimental groups at the initiation of the course. At the conclusion of the study, the MLA post-tests indicated that each section, control and experimental, had made gains in all four skills but that there was no significant difference in these gains.

ARLINGTON

TABLE XII

A Comparison of Gains of Control and Experimental Groups in Arlington 1966-67 on Four Skills of MLA Tests as Analyzed by Use of the Multiple Linear Regression Technique

Skills	Control (n = 13)	Experimental (n = 17)	F Ratio	Degrees of Freedom	Mean Difference
COMPREHENSION	*4.6	8.8	4.94	24	sig. **
SPEAKING	3.5	3.2	0.37	24	n.s.
READING	3.8	0.8	1.26	24	n.s.
WRITING	4.1	5.7	0.04	24	n.s.

Critical value of F at 0.01 level df 24 = 7.82

Critical value of F at 0.05 level df 24 = 4.26

TABLE XIII

A Comparison of Gains of Control and Experimental Groups in Arlington 1965-66 on Four Skills of MLA Tests as Analyzed by Use of the Multiple Linear Regression Technique

Skills	Control (n = 31)	Experimental (n = 31)	F Ratio	Degrees of Freedom	Mean Difference
COMPREHENSION	*6.6	6.6	0.06	54	n.s.
SPEAKING	6.6	5.3	1.71	54	n.s.
READING	4.7	5.0	0.42	54	n.s.
WRITING	4.5	3.7	0.61	54	n.s.

Critical value of F at 0.01 level df 54 = 7.16

Critical value of F at 0.05 level df 54 = 4.02

*The numbers indicate the mean of scores of the classes between the pre-tests and the post-tests.
**Significant (N.S.–Not Significant)

ARLINGTON

TABLE XIV

A Comparison of Control and Experimental Groups Pre-test and Post-test Scores on Cooperative History Tests for Arlington During 1966-67 as Analyzed by the Student "t" Test

Pre-test							Post-test						
Control (n = 16) PRE		Experimental (n = 17) PRE					Control (n = 16) POST		Experimental (n = 17) POST				
$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	d.f.	Mean Diff.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	d.f.	Mean Diff.
153.8	6.5	156.0	6.6	0.96	31	n.s.	161.7	5.9	163.4	5.9	0.87	31	n.s.

Critical value of "t" at 0.01 level
df 28 = 2.47
df 31 = 2.46

Critical value of "t" at 0.05 level
df 28 = 1.70
df 31 = 1.70

TABLE XV

A Comparison of Control and Experimental Groups Pre-test and Post-test Scores on Cooperative History Tests for Arlington During 1965-66 as Analyzed by the Student "t" Test

Pre-test							Post-test						
Control (n = 31) PRE		Experimental (n = 31) PRE					Control (n = 31) POST		Experimental (n = 31) POST				
$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	d.f.	Mean Diff.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	d.f.	Mean Diff.
159.7	6.4	161.2	6.9	0.90	60	n.s.	165.0	5.8	165.4	5.3	0.27	60	n.s.

Critical value of "t" at 0.01 level
df 60 = 2.39

Critical value of "t" at 0.05 level
df 60 = 1.67

The analysis of the cooperative history tests by means of the student "t" test also indicated that there were no significant differences in the preparation of control and experimental students at the beginning of the study in either of the two years, 1965-66 and 1966-67. At the conclusion, both groups had made gains, but there were no significant differences in the progress of control and experimental students.

Summary for Arlington

The conclusion to be drawn from all of these data for Arlington County is that the experimental groups, using a foreign language to study history, learned language equally as well as those in the control groups which limited their efforts to formal study of language and to the correlated study of literature. At the same time the experimental groups learned history, and it

appears that those students were not hampered in their study of history by having used French as their means of communication.

Whereas it cannot be said that the experimental groups learned twice as much as those in the control classes (because those in the control classes were learning literature in addition to language), they were able to eliminate that portion of class time normally devoted to formal study of language and to apply this time to the study of history. In this respect, the experimental students did have an opportunity to get more return from the time invested than the control students.

The data from the multiple linear regression technique indicate the same results—no significant differences, during two years for three skills (speaking, reading, and writing)—as that from the student "t" test. There was no significant difference between the comprehension gain of the two groups during 1965-66, but in 1966-67 the multiple linear regression technique showed a significant gain of 8.8 points in favor of the experimental students. This difference in results of the two techniques for analyzing the comprehension skill is due perhaps to the fact that the multiple linear regression technique took into consideration a number of variables which the student "t" test did not. (See pp. 23-24.

RICHMOND

TABLE XVI

A Comparison of Control and Experimental Groups Pre-test Scores on Four Skills of MLA Tests for School A in Richmond by Means of Student "t" Test

Skills	Control (n = 25)		Experimental (n = 19)				
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	Degrees of Freedom	Mean Difference
COMPREHENSION	161.8	9.4	170.4	7.0	3.31	42	sig. (in favor of exp.)
SPEAKING	164.8	7.0	167.0	4.8	1.17	42	n.s.
READING	166.6	6.9	171.3	7.2	2.22	42	n.s. (at 0.01 level)
WRITING	161.5	6.3	167.7	4.6	3.66	42	sig. (in favor of exp.)

TABLE XVII

A Comparison of Control and Experimental Groups Post-test Scores on Four Skills of MLA Tests for School A in Richmond by Means of Student "t" Test

Skills	CONTROL (n = 25)		Experimental (n = 19)				
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	Degrees of Freedom	Mean Difference
COMPREHENSION	167.7	9.0	170.0	7.5	Not Comparable		
SPEAKING	159.7	4.1	161.8	4.7	1.59	42	n.s.
READING	170.7	8.6	173.1	4.5	1.06	42	n.s.
WRITING	167.9	5.9	171.3	3.9	Not Comparable		

RICHMOND

TABLE XVIII

A Comparison of Gains of Control and Experimental Groups Pre-test Scores on Four Skills of MLA Tests for School B in Richmond by Means of Student "t" Test

Skills	Control (n = 17)		Experimental (n = 19)				
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	Degrees of Freedom	Mean Difference
COMPREHENSION	171.2	4.1	174.8	4.1	2.62	34	sig. (in favor of exp.)
SPEAKING	160.0	6.6	160.5	5.7	0.22	34	n.s.
READING	174.3	8.1	179.4	5.8	2.18	34	n.s.
WRITING	155.8	6.8	159.9	8.0	1.65	34	n.s.

TABLE XIX

A Comparison of Gains of Control and Experimental Groups Post-test Scores on Four Skills of MLA Tests for School B in Richmond by Means of Student "t" Test

Skills	CONTROL (n = 17)		Experimental (n = 19)				
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	"t" Value	Degrees of Freedom	Mean Difference
COMPREHENSION	174.4	12.1	172.7	9.6	Not Comparable		
SPEAKING	156.1	7.7	154.8	4.5	0.61	34	n.s.
READING	161.9	9.9	162.8	7.8	0.30	34	n.s.
WRITING	164.6	8.7	159.7	9.8	1.58	34	n.s.

Pre-test data for school A indicate that the experimental students were superior to the control students in two skills: comprehension and writing. Since they had this initial advantage, the gains of the two groups could not be validly compared in these skills. Both groups were comparable in the speaking and reading skills at the start of the study. The scores of both groups decreased somewhat in speaking from the pre-test to the post-test; conversely, they increased slightly in reading. In neither case were these significant gains or losses.

At the beginning of the study the students in the experimental class of school B were superior in comprehension to those in the control class, and the gains could therefore not be compared validly. They were equivalent in the other skills. By the end of the year, both groups showed losses in speaking and reading; and the experimental group showed a slight loss in writing whereas those in the control class gained slightly. None of these changes, however, were significant.

The progress of both groups in school A and school B was approximately the same. Again, it might be concluded that it is possible to study history in a foreign language without detrimental effects; the advantages incurred for these Richmond students are

the same as those described for the Arlington classes. (Tables VII-XII, pp. 23-27)

It should be noted that for school A the control and experimental group scores in the post-test were somewhat lower for the speaking skill than at the beginning of the study, and the same is true for the experimental students in comprehension. For school B, the control group scored lower in the post-test in speaking and reading; the experimental group showed losses in all four skills. Since it is unlikely that students would be less competent in all skills (as in the experimental group at school B) and since all groups, experimental and control, in both schools experienced at least one loss, the validity of the test results becomes suspect. One assumption might be that the administration of the tests was faulty; another is that scoring was erroneous.

RICHMOND

TABLE XX

A Comparison of Control and Experimental Groups in School A in Richmond on Four Skills of MLA Tests as Analyzed by Use of the Multiple Linear Regression Technique

Skills	Control (n = 25)	Experimental (n = 19)	F Ratio	Degrees of Freedom	Mean Difference
COMPREHENSION	5.9	−0.4	9.61	32	sig.
SPEAKING	−5.1	−5.2	0.01	32	n.s.
READING	4.1	1.8	1.14	32	n.s.
WRITING	6.4	3.6	0.23	32	n.s.

Critical value of F at 0.01 level df 32 = 7.51

Critical value of F at 0.05 level df 32 = 4.15

TABLE XXI

A Comparison of Control and Experimental Groups in School B in Richmond on Four Skills of MLA Tests as Analyzed by Use of the Multiple Linear Regression Technique

Skills	Control (n = 17)	Experimental (n = 19)	F Ratio	Degrees of Freedom	Mean Difference
COMPREHENSION	3.2	−2.1	0.69	28	n.s.
SPEAKING	−3.9	−5.7	1.41	28	n.s.
READING	−12.4	−16.6	2.87	28	n.s.
WRITING	8.8	−0.2	6.87	28	sig.

Critical value of F at 0.01 level df 28 = 7.64

Critical value of F at 0.05 level df 28 = 4.20

The multiple linear regression technique indicates insignificant differences in results of the experimental and control groups of school A in three skills; speaking, reading and writing; the control group made superior progress in comprehension.

Results for school B were essentially the same, but the superior gain posted by the control students was in the writing skill.

Summary for Richmond

The use of the two techniques (student "t" test and multiple linear regression technique) for Richmond provides somewhat different results. With the student "t" test, non-significant differences were produced for all skills that were comparable. The multiple linear regression technique, however, indicated that one control group was superior in the comprehension gain and the other in writing. This indicates a very slight advantage for the control students.

The additional variables used in applying the multiple linear regression technique, as in the case of Arlington, perhaps caused the slightly different results from those shown by the student "t" test.

ALEXANDRIA

The reader will recall that the establishment of control classes was not possible in the Alexandria schools because there were insufficient French IV-V students to constitute two different groups in each school. If the data from Alexandria had been used, it could only be presented without control sections, or by comparison with control sections for Arlington or Richmond. The validity of this technique was questioned.

An additional factor which would cause an analysis of results to be questionable was that in Alexandria the teachers scored their own tests rather than have them done by the Educational Testing Service.

A third limitation on the use of the data was that analysis by means of the student "t" test and by the multiple linear regression technique (using the Arlington control for 1965-66 as a control for Alexandria) produced entirely different results.

Since Alexandria data would contribute no significant information to the summary of the study, the data were deleted.

FAIRFAX

The MLA tests were not administered to control groups in the Fairfax schools, and the data could only be presented without control groups or by using those from Arlington or Richmond. As in the case of Alexandria, this technique was not considered valid.

The only complete data available for analysis were those on the two skills: speaking and writing. Test scores for the other two skills were lost.

Analysis of data, therefore, from the Fairfax County classes was not feasible.

Summary of All Data

A complete set of data exists for two of the four school divisions in the study (5 of 10 classes): Richmond and Arlington. The losses in some scores from pre-test to post-test in the Richmond classes remain unexplained. It therefore appears that complete and reliable data are available only from the Arlington classes. The data from Richmond nevertheless have been retained and analyzed as far as possible.

A total of 172 students made up these classes. They were evenly divided between experimental and control groups as follows:

TABLE XXII

Number of Students for Whom Complete Data Were Available

Identification	Experimental	Control
Arlington, 1965-66	31	31
Arlington, 1966-67	17	13
Richmond, School A	19	17
Richmond, School B	19	25
Total	86	86

The results of the study in Arlington and Richmond are summarized in the following table:

TABLE XXIII

Summary of Comparative Gains for All Groups in Richmond and Arlington

Identification	Language								History
	"t" Test				Multiple Linear Regression Technique				"t" Test
	Comp.	Speak.	Read.	Writ.	Comp.	Speak.	Read.	Writ.	
Arlington 66-67	n.s.	n.s.	n.s.	n.s.	+E	n.s.	n.s.	n.s.	n.s.
Arlington 65-66	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Richmond, School A	N.C.	n.s.	n.s.	N.C.	+C	n.s.	n.s.	n.s.	N.T.A.
Richmond, School B	N.C.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+C	N.T.A.

KEY:

n.s. No significant difference
+E Gain in favor of experimental students
+C Gain in favor of control students
N.C. Not comparable
N.T.A. No test available

"t" Test

In each of the four schools, the MLA cooperative tests for the four skills were administered at the beginning of the study to measure language achievement of control and experimental groups. In three of the 16 instances for comparing achievement the students were not initially comparable. On the remaining thirteen instances, all groups showed approximately equivalent progress (no significant differences).

History cooperative tests could be administered in only two of the schools since no standardized tests were available for any of the courses except world history. In these two cases students' test scores indicated they were initially comparable and that they remained comparable at the end of the study.

Multiple Linear Regression Technique

In the case of the multiple linear regression analysis, one experimental group had a significant gain in one skill over its control group. Two control groups exceeded the experimental groups in one skill each. On the remaining 13 occasions of comparing achievement, there were no significant differences in gains of the groups at the end of the study.

Summary of Data Analysis for All Purposes

There were a total of 34 occasions for comparing experimental and control groups (16 language by student "t" test, 16 language by multiple linear regression technique and two history by student "t" test). On three occasions the groups were not equivalent at the initiation of the study, and their progress could therefore not be compared. On one occasion an experimental group was superior; on two occasions control groups were superior. On the remaining occasions, there were no significant differences in the gains of control and experimental groups.

It is evident, therefore, that the experimental groups' measured progress was almost identical to that of the control groups. It should be remembered that the experimental students were learning history and language to the extent that they were free to elect to have their credit assigned in either history or language. These students therefore profited more from their time spent in this class than either the language control or the history control students did.

SECTION IV

CONCLUSIONS

The following relationships may be drawn between the objectives of this study in teaching history in a foreign language (listed on pages 2 and 3) and the results of the study.

Basic Objectives

1. *To ascertain whether certain advanced students could apply their language skills, gained over a minimum of three years of study and by means of techniques emphasizing oral as well as written communication, to practical purposes, for example, to the study of an academic subject.*

   The data acquired from the Arlington and Richmond classes indicate that after a minimum of three years of language study, students are capable of applying their linguistic skills to the study of an academic subject (history in this case). Further evidence which supports these data are the opinions of teachers in all classes (pp. 11-15), those of most of the students (pp. 15-17), and the evaluations of all classes by the consultants (pp. 17-23).

2. *To compare the development of language proficiency in classes devoted to the study of an academic subject with that in regular foreign language classes concerned with conventional language and literature.*

   The same data affirm that students studying history in a foreign language learn approximately the same amount of language through usage as those studying language and literature in conventional courses. Most teacher and student opinions also reflect this conclusion. (pp. 11-15 and pp. 15-17.)

Secondary Objectives or Concurrent Benefits

1. *To prepare students for reading original language documents, other primary sources, and literature related to the topic of study.*

   Whether or not this objective was achieved rests in the fact that most of the students' basic and supplementary texts and learning aids were printed in the foreign language being used in the history classroom. That they worked daily with these materials indicated that they could do so. It was never thought from the beginning, however, that students could use materials in another language with the ease that they use their native language, nor did experience dispel this belief. (See teacher, student, and consultant evaluations, pp. 11-23, for further details concerning the problems of using materials in another language.) The fact remains, nevertheless, that they made a successful first step in working with foreign language resources of a moderate level of difficulty.

2. *To provide a different insight into the study of history which is gained only through the presentation of the material in another language and from another point of view.*

   The use of sources written in a foreign language by people with points of view and interpretations which were different in some cases from those of authors of American textbooks did provide different insights. Numerous students and teacher comments (pp. 11-17) reflect this fact. This achievement of this objective is considered a major outcome of the study, and it is one which has particular benefits for the study of history.

3. *To emphasize the interdisciplinary relationship between two areas of study which are inherently related but whose relationship is frequently neglected.*

   The emphasis on this relationship was accomplished by using the language of another people to study other people. To some extent language and culture became synonymous. This, too, is considered a significant finding of the study.

4. *To conserve time by permitting students to pursue two subjects simultaneously; for example,*

French and mathematics, Spanish and world history.

Since the testing indicated that students in control and experimental groups learned language approximately to the same degree and since the same results occurred in the only cases in which history growth could be measured (Arlington), it would seem that students did receive more in return for their time invested than if they had not had this unique opportunity.

5. *To develop a high degree of motivation towards foreign language study by applying acquired language skills to a utilitarian purpose.*

Motivation is very difficult to measure, and assessment of it in the case of this study is only subjective. Although comments varied from class to class, the majority of student comments (pp. 15-17) seem to indicate a high degree of interest in the courses. Six of the nine teachers (p. 10) said that they thought their students showed greater interest in the foreign language class than students usually show. Two indicated less interest and one teacher thought lack of fluency in the languages quelled student interest to some extent. Majority opinion seems to indicate a superior degree of student interest and motivation than is usually found in language classes.

6. *To minimize the concept of "language for the language classroom."*

This, too, is difficult to assess, but the nature of the courses made language a tool rather than an end within itself. In answer to question 10 of the teachers' evaluation sheet (p. 11), teachers agreed unanimously that the main objective of the class for the majority of students was history; language, therefore, must have been relegated to usage as a tool.

SECTION V

IMPLICATIONS FOR THE FUTURE

It would seem appropriate to cite the status of continuing, current, and future interest in teaching another subject in a foreign language since the close of the 1966-67 school term.

The end of the pilot study did not signal the demise of teaching history in a foreign language in Virginia schools. Two of the three Fairfax schools offered their classes again in 1967-68. Two classes also continued in Richmond although because of personnel changes one was offered in a different school. The class in Arlington was terminated at the end of the study, but plans are now being made for its inclusion again in 1968-69. One class in Alexandria was continued in 1967-68, and plans are being made to reincorporate one in another school in 1968-69.

Numerous requests for the summary report, a special article, or answers to certain questions concerning the pilot study in teaching another subject in a foreign language, have been received by the director of the study. These requests come from teachers and administrators who are considering the initiation of similar courses, and from researchers, publishers' representatives, and editors of educational journals.

Similar efforts have been begun in other regions of the United States.

Although the number of students involved in the study for whom complete data are available is somewhat limited, control and experimental classes have been available, pre-tests and post-tests have been administered, and the resulting data have been analyzed by acceptable research techniques, consultant, teacher, and student evaluations have ben solicited and presented and grades have been analyzed and reported. It would apear that the Virginia study on teaching an academic subject in a foreign language has something worthwhile to contribute to an investigation which is timely and which grows in interest among foreign language educators as programs expand and intensify.

Appendix A

Evaluation Sheet

CRITERIA FOR THE EVALUATION OF PILOT STUDY CLASSES OF HISTORY TAUGHT IN A MODERN FOREIGN LANGUAGE

Teacher_____

Date_____

Please indicate the basis on which the evaluation was made by checking the activities below:

_____ 1. Classroom observation.
_____ 2. Conferences with teachers.
_____ 3. Examination of proposed tests.
_____ 4. Examination of completed tests.
_____ 5. Informal contacts with students.
_____ 6. _____

1. Coverage of content is comprehensive and includes major areas of { French history / Latin American history / World history }

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

2. Attention is given to major civilizations of all areas of the world. (Applies to world history course only)

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

3. Attention is given to cultural, economic, intellectual and social aspects as well as the political aspects of French, Latin American and World history.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

4. Presentations of teachers indicate a knowledge and understanding of the subject matter of the course.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

5. Students show a knowledge of significant persons, events, ideas of { French history / Latin American history / Major world civilization }

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

6. Ideas and events of the past are related to current conditions and situations in a manner which is valid and which helps students to discern relationships.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

7. Students' contributions to class discussions indicate an interest in subject and careful preparation of assignments.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

8. Students show an understanding of significant events and ideas and of the relationship between various ideas and events.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

9. The class is conducted in a manner conducive to the development of skills of critical thinking.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

10. Evaluation of students' work is comprehensive, based on the objectives of the course and used for purposes of instruction as well as measurement of progress.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

11. A variety of instructional materials is used including primary as well as secondary sources.

_____ Outstanding _____ Satisfactory _____ Unsatisfactory

Please add any other comments which you think pertinent:

_____

_____

_____

APPENDIX B

Pilot Study Teachers and Biographical Data

1. Condit, William W., Mr.; B.S., Haverford College; M.A., University of Pennsylvania; additional study, George Washington University; Postgraduate Professional Certificate; 7 years teaching experience; endorsed in French, German, English, History; traveled extensively in Europe.
2. Deverall, Catherine N., Mrs.; B.A., George Washington University; M.A., George Washington University; Sorbonne; American University; Collegiate Professional Certificate; 6 years teaching experience; endorsed in French, history, general science, chemistry; studied and traveled extensively in France.
3. Garrett, Mary Neale, Miss; B.A., Longwood College; M.Ed., William and Mary; Sorbonne; NDEA Institute, Hollins College; University of Richmond; Postgraduate Professional Certificate; 17 years teaching experience; endorsed in French, English, geography, history and grades six and seven.
4. Grant, Alberta L., Miss; A.B., Birmingham-Southern College; M.A., University of Alabama; Columbia University; Laval University; Postgraduate Professional Certificate; 37 years teaching experience, endorsed in English, history, mathematics, French and grades six and seven; travel and study in France.
5. Hatcher, Peter W., Mr.; B.S., University of Virginia; NDEA Institute, Converse College; University of Guadalajara; Collegiate Professional Certificate; 8 years teaching experience; endorsed in English, history, social studies, Spanish; extensive travel in South America, Spain, Mexico, Caribbean.
6. Linse, Robert W., Mr.; B.S., Wisconsin State College; Temple University; University of Wisconsin; University of Manchester (England); 11 years teaching experience; Collegiate Professional Certificate; endorsed in English, history, social studies, French; travel in Western Europe.
7. MacIntyre, David H., Mr.; B.A., University of Oklahoma, M.A., University of Oklahoma; George Washington University; NDEA Institute, Georgetown University; NDEA Institute, Arcachon, France; Postgraduate Professional Certificate; 16 years teaching experience; endorsed in history, French, Spanish; bilingual; lived in South America and France.
8. Perry, Ernest C., Mr.; B.A., University of North Carolina; M.A.T., University of North Carolina, Collegiate Professional Certificate; 3 years teaching experience, endorsed in history, social studies, French; Winner of A.A.T.F. scholarship to study in France; travel in Western Europe.
9. Staren, Helen S., Mrs.; B.A., Allegheny College; Collegiate Professional Certificate; Catholic University; American University; junior year at Sorbonne; 3 years teaching experience; endorsed in French, history; travel in Western Europe.
10. Taylor, Ruth, Miss; B.A., Virginia Union University; M.A., Teachers' College, Columbia University; NDEA Institute, Virginia State College Collegiate Professional Certificate; 11 years teaching experience, endorsed in English, French, history.

APPENDIX C

Other Personnel Assisting with the Study

1. State Department of Education

Miss Helen P. Warriner, Supervisor of Foreign Languages, Division of Secondary Education, State Department of Education (Coordinator of pilot study)

Dr. Charles Bertram, Assistant Supervisor of Pilot Studies, Division of Educational Research, State Department of Education from June 1, 1966 to June 1, 1967; became Supervisor of Educational Research on June 1, 1967 (Research consultant and data analyst)

Mr. Numa P. Bradner, Supervisor of Secondary Education, Division of Secondary Education until July 1, 1967 (General advisor)

Mr. Thomas P. Burke, Jr., Supervisor of History, Government, and Geography, Division of Secondary Education, State Department of Education (History consultant)

Mr. George W. Burton, Director of Secondary Education; appointment effective June 1, 1966, to replace Mr. Charles E. Clear (General advisor)

Mr. Charles E. Clear, Associate Director of Secondary Education, replacing Mr. Gerald L. Quirk on September 25, 1965; on June 1, 1966, was named Director of the Division of Educational Research to re-

place Mr. Alfred L. Wingo (General advisor and research consultant)

Dr. William S. Graybeal, Supervisor of Educational Research, Division of Research, State Department of Education until September 15, 1965 (Research consultant)

Mr. Fendall R. Ellis, Director of the Division of Educational Research, State Department of Education; became Director of Special Services on September 1, 1965 (Research consultant)

Mrs. Jean W. Payne, Assistant Supervisor of Foreign Languages, State Department of Education (Assistant coordinator of pilot study)

Mr. Gerald L. Quirk, Director of the Division of Secondary Education, State Department of Education; deceased (General advisor)

Dr. Alton L. Taylor, Supervisor of Educational Research, Division of Research, State Department of Education until June 15, 1967 (Research consultant)

Mr. Alfred L. Wingo, Special Assistant to the Supervisor of Public Instruction and Acting Director, Division of Educational Research; replaced Mr. Fendall R. Ellis on August 1, 1966 (Research consultant)

Mr. Daniel C. Link, Assistant Supervisor of Pilot Studies, Division of Educational Research, State Department of Education, effective September, 1966 (Research consultant)

Mrs. Lottye W. Russell, Assistant Supervisor of Foreign Languages, State Department of Education, effective September 1, 1966 (Assistant coordinator of pilot study)

Dr. W. S. Slawson, Assistant Supervisor of Educational Research, Division of Educational Research, State Department of Education, effective July 16, 1967 until June 15, 1968 (Research consultant and data analyst)

2. Division Coordinators

Mrs. Emma B. Davidson, Coordinator of Foreign Languages, Richmond Public Schools, Armstrong High School, Richmond, Virginia

Miss Mildred Kline, Coordinator of Foreign Languages, Richmond Public Schools, Thomas Jefferson High School, Richmond, Virginia

Mrs. Pearl S. McDonald, Supervisor of Foreign Languages, Arlington County Public Schools, 4751 North 25th Street, Arlington, Virginia

Dr. Robert Parlier, Director of Secondary Education, Alexandria Public Schools, Alexandria, Virginia

Mr. Gareth W. Rose, Assistant Supervisor of Foreign Languages, Fairfax County Public Schools, 10700 Page Avenue, Fairfax, Virginia

3. Local School Divisions

Dr. Lucien D. Adams, Assistant Superintendent, Richmond Public Schools (General administrator)

Mr. France M. Brinkley, Head of History Department, Armstrong High School, Richmond (History consultant)

Mr. Daniel B. Fleming, Supervisor of Social Studies, Fairfax County Schools (History consultant)

Mr. W. Harold Ford, Assistant Superintendent, Fairfax County Schools (General administrator)

Mr. Ray Hiner, Supervisor of History and Economics, Richmond Public Schools (History consultant)

Mr. Glen Hinton, Teacher of Spanish, Thomas A. Edison High School, Fairfax County Schools (Language teacher)

Mr. Charles E. King, Director of Secondary Education, Fairfax County Schools (General advisor)

Dr. Harold L. Mack, Director of Secondary Programs, Arlington County Schools (General advisor)

Miss Mary Maddox, Head of History Department, Thomas Jefferson High School, Richmond (History consultant)

Mr. Seymour B. Stiss, Supervisor of Social Studies Arlington County Schools (History consultant)

Dr. Dorothy Torpey, Chairman of Social Studies Department, T. C. Williams High School, Alexandria (History consultant)

Dr. Harold M. Wilson, Assistant Superintendent, Arlington County Schools (General administrator)